PRESENTATION OUTLINE

- Introduction
- Industry Background—Distribution Software
- Company Background
- Product Information
- Sales & Marketing Information
- Vendor Strengths, Weaknesses, & Competitive Advantage
- Vendors' Future Directions
- Customers' Observations
- Vendor Synopses
- Conclusions
- Recommendations

OBJECTIVE, SCOPE, & METHODOLOGY

- Objective
  - Gather Competitive Information on Four Target Vendors
- Scope
  - Locations: U.S. and Canada
  - Target Industries
    - ° Distribution
    - ° Others (Distribution Content)
- Methodology
  - Vendor Interviews
  - Customer Interviews
  - Qualitative Emphasis
  - Call Lists Provided

NOTES AND OBSERVATIONS

- Effective Combination: Vendor and Customer Interviews
- Thorough, "Crafted" Questionnaires
  Yielded
  Consistent, Detailed Responses
- Weekly Status Reporting
- GSI/Transcomm Was *Very* Responsive
- Call Lists Were Helpful, but…
- Presentation = Final Report
  - Overheads Include Tabulated Data
- Interactive Discussion

VENDOR INTERVIEWS

- Background
  - Targeted: 4
  - Contacted: 3
  - Exception: Unitronix
  - Alternate Unitronix Source: IPO Prospectus (Aug/88)

- Other
  - "Right" Respondents
    - Account/Marketing Manager
    - Vice President, Sales & Marketing
    - Product Manager
  - Complete Responses
  - Not "Salesy"

USER INTERVIEWS

- Terminology: Customer = User

- Background
  - Minimum: 5 per Vendor
  - Completed: 5 Each for Cardinal & Unitronix
    6 Each for Cullinet & MICA

- "Appropriate" Respondents (Total: 22)
  - Data Processing/I.S. Director/Manager 9
  - Other Data Processing Managers 4
  - V.P./Director/Manager of Distribution 3
  - Senior Programmer Analyst 2
  - Controller/Assistant Controller 2
  - Operations Manager 1
  - Unknown 1

- User Responses
  - Honest
  - Thorough
  - A Few "Live Ones"

INDUSTRY BACKGROUND—
DISTRIBUTION SOFTWARE

Historical Situation

- Mainframe-Based, Batch-Oriented Application
- Migrated to 32-Bit Supermini

Current Situation

- Europe Is Way Ahead of U.S., Due to 2 Key Factors:
  - Need to Optimize Space
  - Need to Optimize (Union) Manpower
- Relatively Slow Migration to RDBMS

Companies' Backgrounds

COMPANIES' BACKGROUNDS (I)

	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
Year Founded	1981	1975	1976	1976
Number of Employees	46	75-85*	75	74
Publicly Traded?	No	Yes	No	Yes

* INPUT Estimate

COMPANIES' BACKGROUNDS (II)

	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
1987 Company Revenues	Less Than $10 Million	$175 Million	Less Than $10 Million	$19.4 Million
1987 Distribution Revenues	Less Than $10 Million	$4-5 Million	Less Than $10 Million	$15.9 Million
Percent Expected Revenue Growth, 1987-1988 (Distribution)	> 50	20	20	< 10*
Profitable?	Yes	No * (Revenue/ Employee)	Yes	Yes

* INPUT Estimate

COMPANIES' BACKGROUNDS (III)

	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
U.S./Non-U.S. Revenue (%)	90/10	65/35*	70/30	50/50
Revenue Breakdown (Percent):				
- Hardware	0	0	40	
- License Fees	45	70	40	
- T&M Services	45	30	20	Not
- Distributors	10	0	0	Available
TOTAL	100	100	100	

* INPUT Estimate

ACQUISITION HISTORY

	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
Was Acquired?	No	Yes	No	No
Made Acquisitions?	No	No	No	Yes

OTHER INFORMATION—UNITRONIX

- Sources of 3% of Revenues (for 1st 9 months, 1988):
  - Hardware Repairs
  - Installation
  - Maintenance Services

- Sold hardware and software to North East Paging Corporation (NEP) in exchange for that company's capital stock. NEP went bankrupt in 1987. Unitronix wrote off $190,000 investment in FY 1987.

VENDOR STAFFING COMPARISON

	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
TOTAL STAFF	46 (100%)	75 - 85*	75 (100%)	74 (100%)
Sales Reps	2 (4%)		2 (3%)	29**(39%)
R&D and Operations	40 (87%)	Not Available	67 (92%)	26 (35%)
Admin.	4 (9%)		4 (5%)	19 (26%)

* INPUT Estimate

** Includes Marketing Staff

Product Information

HARDWARE PLATFORM/PRICING INFORMATION

	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
Processor(s) Supported:				
- DEC VAX	X	X	X	X
- HP 3000	X*			
- DEC MicroVAX		X		X
- DEC PDP-11				X
License Fee:				
- Order Entry	N/A	N/A	$75,000	N/A
- Accts Payab.	N/A	N/A	$10,000	N/A
- Other	N/A	N/A	Base System Utilities (Required) $65,000	N/A

* Indicates sold only by distributors

SOFTWARE MAINTENANCE/NUMBER OF INSTALLATIONS

	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
Annual Software Maintenance Fee	12%	12%	10%	Unknown
Number of Installations:				
- Order Entry	180 packages			
- Accts Payab.	N/A			
- Unspecified	300 packages at 100 sites		>100 packages at 300 sites	Unknown # 270 sites

SOFTWARE PRICING DETERMINANTS

Factor	Cardinal Data	DMS/ Cullinet	Systems by MICA	TOTAL
Size of CPU	X	X	X	3
Discounts for Mult. Modules	X	X	X*	3
Charge What the Mkt Will Bear	X	X		2
At a Fixed Standard Rate	X			1
Total Potential Revenue		X		1
Number of Users				0

SOFTWARE PRICING DETERMINANTS

Factor	Cardinal Data	DMS/ Cullinet	Systems by MICA	TOTAL
VAX Units of Processing (VUPs)				0
MIPS				0
Other				
Multisite Licenses		X		1
VAXcluster Pricing		X		1
By Module			X	1
TOTAL	4	6	3	13

* Indicates "Discounts for Multiple CPUs"

TWO MOST FREQUENTLY REQUESTED PRODUCT ENHANCEMENTS

(Vendor Responses)

Enhancement	Cardinal Data	DMS/ Cullinet	Systems by MICA	TOTAL
EDI	X		X	2
DRP			X	1
Bar Coding	X			1
Pallet I.D. Tracking		X		1
Unit of Measure Conversion		X		1

SUMMARY—PRODUCT INFORMATION (I)

- All Vendors Support VAX. Additional CPUs Supported:
  - Cardinal (Distributors) Supports HP 3000
  - Cullinet Supports MicroVAX
  - Unitronix Supports MicroVAX and PDP-11
- Annual Software Maintenance Fees
  - 12%: Cardinal & Cullinet
  - 10%: Systems by MICA
- Installations:
  - Cardinal: 300 Packages at 100 Sites
  - Cullinet: 180 Packages (Order Entry)
  - MICA: >100 Packages at 300 Sites
  - Unitronix: Unknown Number at 270 Sites

SUMMARY—PRODUCT INFORMATION (II)

Software Pricing Determinants

- Number of "Factors" Used:
  - Cullinet: 6
  - Cardinal: 4
  - MICA: 3
- Cullinet Is Most Innovative
  - Multisite Licensing
  - VAXCluster Pricing
- Most Frequently Requested Product Enhancements
  - EDI (Cardinal & MICA)
  - DRP (MICA)
  - Bar Coding (Cardinal)
  - Pallet I.D. Tracking (Cullinet)
  - Unit of Measure Conversion (Cullinet)

Sales and Marketing

Information

U.S. SALES COVERAGE

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
No. of U.S. Sales Offices	1	**36**	2	5
No. of U.S. Distributors	**3**	0	0	0
Location of U.S. Sales/Distributor Offices	- Garden Grove* - Indianapolis* - Unknown* - Needham Heights	- Major Cities	- Unknown	- Tampa - Boston - Chicago - L.A. - Piscataway

* Indicates "Distributor Location"

NOTE: (1) Distributors:
- Sell HP 3000-Based Software
- Cannot Sell to East Coast

(2) Indianapolis Was Added in August 1988

NON-U.S. SALES CAPABILITIES

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
No. of Non-U.S. Sales Offices	0	**26**	**3**	0
Location(s) of Non-U.S. Sales Offices	N/A	- Canada - England - Ireland - Scandinavia - Far East	- Canada - England - Ireland	N/A
No. of Non-U.S. Distributors	**3**	**19**	0	0
Locations of Non-U.S. Distributors	- Montreal - Toronto - Sydney - Melbourne - London	- Western Europe - Mideast - Far East	N/A	N/A

N/A = Not Applicable

SUMMARY—SALES CAPABILITIES

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
No. of U.S. Sales Offices	1	36	2	5
No. of U.S. Distributors	3	0	0	0
No. of Non-U.S. Sales Offices	0	26	3	0
No. of Non-U.S. Distributors	3	19	0	0
TOTAL	7	81	5	5

MARKETING RELATIONSHIPS WITH HARDWARE VENDORS

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
Cooperative Marketing Agreements?	Yes	Yes	Yes	Yes
Agreements with Which Hardware Vendors?				
- DEC		X (CMP)	X (SCMP)	X (SCMP)
- HP	X (HP PLUS)			

MARKETING/SUPPORT PROGRAMS

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
User Group	Will Begin Nov. 1988	Yes	Yes	Yes
Newsletter	No	Yes	Yes	Yes
Annual Conference	Yes	Yes	Yes	Yes
Customer Support Center	Yes	Yes	Yes	Yes
On-Site Training	Yes	Yes	"Absolutely"	Unknown

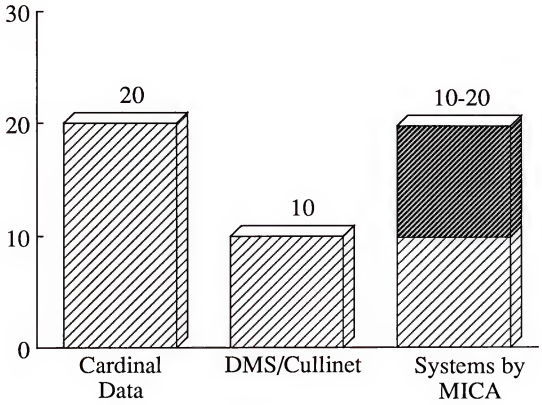
MOST EFFECTIVE LEAD-GENERATION METHODS

(Responses Below Are Those Ranked "High" by Vendors)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Co-Op Marketing Agreements with H/W Vendor	X	X	X	X*	4
Advertising	X	X			2
Consultant Liaison	X				1
Seminars		X			1
Trade Shows		X			1
Referrals from Customers			X		1
TOTAL	3	4	2	1	10

* According to the Prospectus, co-op marketing is responsible for 25% of the company's total PRAXA business.

NUMBER OF NEW CUSTOMERS ADDED IN 1987
(Vendor Response)



SUMMARY—MARKETING/CUSTOMER SUPPORT ISSUES

- User Group
  - Cardinal: Will Begin in November 1988
  - Others: Established
- Cardinal Does Not Publish a Newsletter
- Most Effective Lead-Generation Methods
  - Cooperative Marketing Agreements with Hardware Vendor (All 4)
  - Advertising (Cardinal and Cullinet)
- Number of New Customers Added in 1987
  - Greatest (tie): Cardinal and MICA
  - Least: DMS/Cullinet
  - Unknown: Unitronix

"AVERAGE" CUSTOMER PROFILE— CARDINAL DATA

Industry Emphasis:

- Discrete & Process Manufacturing (vs. Distribution)
- More Discrete Than Process

Customer Company Revenues:

- $25-50 Million
- Greater Than $250 Million

Customer Division Revenues:

- $25-50 Million
- $250-500 Million

"AVERAGE" CUSTOMER PROFILE— DMS/CULLINET

Industry Emphasis:

- Pharmaceuticals
- Chemicals
- Food & Beverage Manufacturers
- Wholesale Distributors

Customer Company Revenues:

- All Greater Than $25 Million, Except $150-500 Million

Customer Division Revenues:

- $ 25-150 Million

"AVERAGE" CUSTOMER PROFILE— SYSTEMS BY MICA

Industry Emphasis:

- Durable Goods Distributors
- Some Manufacturers Who Distribute

Customer Company Revenues:

- $10-500 Million, Except $125-250 Million

Customer Division Revenues:

- $10- $500 Million, Except $125-250 Million

"AVERAGE" CUSTOMER PROFILE—UNITRONIX

Industry Emphasis:

- Discrete Manufacturers
- Combination Manufacturers/Distributors
  Examples:
  - Light Fixtures
  - Bicycle Components

Customer Company Revenues:

- $10-100 Million

Customer Division Revenues:

- $10-100 Million

SUMMARY—AVERAGE CUSTOMER PROFILES

Cardinal

- Manufacturing Emphasis with Distribution Flavor
- Concentrates on: Small & Large Divisions

DMS/Cullinet

- "Schizophrenic" (Manufacturing & Wholesaling)
- Largest Customer Revenue Gap Indicates Widely Scattered Targets (Real Focus: Small and Very Large Companies)

Systems by MICA

- Focused on Distributors with Some Manufacturers
- Emphasis: Very Small to Largest Companies

Unitronix

- Discrete Manufacturers and Combination Manufacturers/ Distributors
- Focus: Very Small to Medium Companies

Vendor Strengths,

Weaknesses, and

Competitive Advantage

PRODUCT-RELATED VENDOR STRENGTHS
(Vendor Responses)

Strength	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
Functionality of Software			X	
DEC VAX as Platform			X	
Flexible Software		X		
"Radio Frequency" Module		X		
Product Quality	X			
Forthcoming Enhancements	X			

TOTAL: 6

SALES/MARKETING-RELATED VENDOR STRENGTHS
(Vendor Responses)

Strength	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix
Good Reference Accounts			X	
Worldwide Installations		X		No Response
Customer Satisfaction	X			

TOTAL: 3

PRODUCT-RELATED VENDOR STRENGTHS
(User Responses)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Quality/ Functionality/ Design/ Versatility/ Flexibility of Software	4	4	2	2	12
User-Friendly Programs	X		X		2
Ease of Software Modification				X	1
Programming Technology/ Tricks			X		1

PRODUCT-RELATED VENDOR STRENGTHS
(User Responses)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Integrated Software Modules				X	1
Report Generation Software		X			1
DEC VAX as H/W Platform	X				1
Payment Analysis Software		X			1
TOTAL	6	6	4	4	20

SUPPORT-RELATED VENDOR STRENGTHS
(User Responses)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Excellent Support/ Technical Staff	2	X	2		5
"Customer Commitment"/ Responsive to Users' Needs			X	3	4
Annual User Group Meeting				X	1
Excellent Documentation		X			1
TOTAL	2	2	3	4	11

CORPORATE-RELATED VENDOR STRENGTHS
(User Responses)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Experience/ Knowledge in Distrib.	X	X	X	X	4
"Ahead of Industry Trends"			X		1
Close Geographic Proximity	X				1
Understanding of Customer's Business		X			1
TOTAL	2	2	2	1	7

SALES/MARKETING & FINANCE
VENDOR STRENGTHS
(User Responses)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Sales/Marketing Related					
Price	X		X		2
Good Marketing	X			X	2
TOTAL	2	0	1	1	4
Finance Related					
Has Sufficient Funds to Support Product Development		X		X	2
TOTAL	0	1	0	1	2

SUMMARY OF VENDOR STRENGTHS

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
User Responses					
Product Related	6	6	4	4	20
Support Related	2	2	3	4	11
Corporate Issues	2	2	2	1	7
Sales/Mktng Rel.	2	0	1	1	4
Finance Related	0	1	0	1	2
GRAND TOTAL (Users)	12	11	10	11	44
Vendor Responses					
Product Related	2	2	2	-	6
Sales/Mktng Rel.	1	1	1	-	3
TOTAL	3	3	3		9

PRODUCT-RELATED VENDOR WEAKNESSES
(User Responses)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
S/W Not Optimized for DEC CPU	**4**				4
S/W Quality Control/Bugs			**X**	**X**	**2**
If S/W Was Customized, the Future Enhancements Don't "Fit"	X				1
Stability of Software			X		1
Lack of Standardized Software			X		1

PRODUCT-RELATED VENDOR WEAKNESSES
(User Responses)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Hard to Maintain Code				X	1
No Significant Error Recovery Procedures				X	1
Procedures & Data Are Not Reliable				X	1
Poor Integration with Other Vendors' Factory S/W	X				1
Not for Work-in-Process	X				1
TOTAL	7	**0**	3	4	14

INPUT

SUPPORT-RELATED VENDOR WEAKNESSES
(User Responses)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Quality of Support (Direct)	X	X		X	3
Quality of Support (Indirect/ Geography)	X		X		2
User Documentation			**2**		2
Technical Documentation			X		1
TOTAL	2	1	4	1	8

COMPANY AND SALES/MARKETING-RELATED VENDOR WEAKNESSES

(User Responses)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Company Related					
Co. Not Yet Familiar with Distrib. S/W		X			1
Hard to Talk to after Cullinet Purchase				X	1
Co. Transition from Custom S/W to Packaged S/W			X		1
Poor Financial Position (Co. Was Acquired)		X			1
Too-Rapid Company Growth	2			X	3
TOTAL	2	2	1	2	7

COMPANY AND SALES/MARKETING-RELATED VENDOR WEAKNESSES
(User Responses)

Criterion	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Sales/Marketing-Related					
High Price				X	1
TOTAL				1	1

SUMMARY OF VENDOR WEAKNESSES

Weakness	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
User Responses					
Product Related	**7**	0	3	4	**14**
Support Related	2	1	**4**	1	**8**
Company Related	2	**3**	1	1	**7**
Sls/Mkt-Related	0	0	0	1	1
GRAND TOTAL	**11**	4	8	7	30

COMPETITIVE ADVANTAGE—
CARDINAL DATA

Cardinal's Response

- Capability of the Software
- Commitment to Happy & Well-Serviced Customers (Compare)

User Responses

- Close Geographical Proximity
- Nothing
- On-Line User Documentation
- Offers More to End Users Than Any Other Vendor
- Met 80% of Our Needs without Modification
- Concentrates on Sales Order Management, Not Manufacturing
- The Software Matches the Way We Do Business

COMPETITIVE ADVANTAGE—
DMS/CULLINET

DMS/Cullinet's Response

- Experience in Implementing/Customizing Software (Compare)

User Responses

- Customization to Meet Their Needs (PDP-11/44)
- They Sell Solutions to End Users, Not the Technical Staff (Modifications Are Very Expensive)
- *Past* Experience in Distribution
- *Past* People (Many Have Left the Company)
- Service-Oriented Company
- Proven Product for Their Business
- Inventory Locator System (Product)

COMPETITIVE ADVANTAGE— SYSTEMS BY MICA

MICA's Response

- Flexible Software (Compare)
- Blend of High-Level and Flexible Architecture (Compare)
- Highly Trained, Motivated, Stable Staff

User Responses

- Flexibility of Software
- Understanding of How a Business Operates (vs. Emphasis on Technical Capabilities)
- Experience in Distribution Applications
- Versatile, Adaptable Software Design

COMPETITIVE ADVANTAGE—UNITRONIX

Unitronix's Response

- None

User Responses

- Commitment to Helping Customers & Doing What's Right
- Will Listen to You
- Stands Behind Customized Software
- Simplicity in Screens and Report Contents
- Integrated Software Modules
- Serves Distribution and Manufacturing Companies
- Emphasizes Distribution, Not Manufacturing, Software

SUMMARY—COMPETITIVE ADVANTAGE

- Vendors Tout the Product
  - Capability
  - Flexibility
  - Customization
- Users Emphasize Mainly Nonproduct Attributes:
  - Vendor's Understanding of Customer's Business Operations
  - Vendor's Experience in the Distribution Business
  - Vendor's Selling of "Solutions"
  - Service & Customer Support
  - Documentation

Future Directions

MOST INFLUENTIAL TECHNOLOGY TRENDS
(Vendor Responses)

CARDINAL	CULLINET	SYSTEMS BY MICA
• **EDI**	• **EDI**	• Faster RDBMS
• Bar Coding	• New Radio Frequency-Based Applications	• More Mature "CASE" Technology
• HP's RISC Technology	• **Automation** (Conveyor Belts, Scanners, Auto. Mat'l Handling Equipment, Auto. Guide Vehicles)	• Faster CPUs
• DEC's New Transaction Processing Software		

SHORT-TERM PRODUCT/SERVICE UPGRADES
(Vendor Responses)

CARDINAL	CULLINET	SYSTEMS BY MICA
• EDI	• Additional Warehouse Features	• 24-hr/7-day Support
• Bar Coding		• On-Line User "Bulletin Board"
• Expanded Hours for Customer Service for Western Canada & U.S. Customers		

PRODUCTS DUE IN 18-24 MONTHS
(Vendor Responses)

CARDINAL	CULLINET	SYSTEMS BY MICA
• No Response	• Recovery Unit Journaling	• More-Sophisticated DRP
	• EDI Interfaces	• Sales Forecasting for Retail Food Industry
		• New EDI Protocols

CUSTOMER-REQUESTED NEW PRODUCTS/ SERVICES

(Vendor Response)

CARDINAL	CULLINET	SYSTEMS BY MICA
• No Response	• No New Products/ Enhancements Only	• Integrated Telemarketing System • Fixed Assets Based on New Tax Laws

CURRENT DISTRIBUTION INDUSTRY TARGETS
(Vendor Responses)

CARDINAL	CULLINET	SYSTEMS BY MICA
• Discrete Mfg.	• Pharmaceuticals	• Durable Goods Distributors with Sales > $50 Million
• Process Mfg.	• Chemicals	
	• Food & Beverage	
	• Wholesale Distribution	
Broadest Focus	Most Focused	Somewhat Focused

FUTURE DISTRIBUTION INDUSTRY TARGETS
(Vendor Responses)

CARDINAL	CULLINET	SYSTEMS BY MICA
• None Mentioned	• Pharmaceuticals	• Manufacturers That Distribute
	• Chemicals	
	• Food & Beverage	
	• Wholesale Distribution	
	[Same as Current Targets]	

NEW GEOGRAPHIC AREAS
(Vendor Responses)

CARDINAL	CULLINET	SYSTEMS BY MICA
New Geographic Areas		
• No Changes	• None	• Northeastern U.S. • Western Europe
Reasons for Expanding/Not Expanding		
• Will Add Distributors, Not Co. Sales Offices	• Already Has an International Presence	• Northeast: - Strong Base - Tired of Flying! • Western Europe: - 1992 EEC - High Current Growth - Very Low-Cost Entry due to Country Grant

Users'

Observations

PRIMARY INFORMATION SOURCES FOR USERS

Source	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Periodicals	1	1	**2**	1	**5**
H/W Vendor Referrals		1		**2**	**3**
Consultant	1				1
Industry Contacts	1				1
Industry Conference		1			1
S/W Vendor Referrals	1				1
Thru User Corporate Headquarters		1			1
Vendor Sales Rep Called				1	1
TOTAL	4	4	**2**	4	14

SECONDARY INFORMATION SOURCES FOR USERS

Source	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Periodicals	1	1		2	**4**
H/W Vendor Referrals	1	1	1		**3**
Industry Contacts				1	1
Trade Association		1			1
S/W Vendor Referrals	1				1
Thru User Company Internal Staff		1			1
Trade Show		1			1
Reference Accounts		1			1
Vendor Sales Rep Called	1				1
TOTAL	4	**6**	**1**	3	14

INPUT

ZGS2-66

SUMMARY—LEADING INFORMATION SOURCES FOR USERS

Source	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Primary					
Periodicals	2	2	2	3	**9**
H/W Vendor Referrals	1	2	1	2	**6**
Secondary					
Industry Contacts	1			1	2
S/W Vendor Referrals	2				2
Vendor Sales Rep Called	1			1	2

SUMMARY—LEADING INFORMATION SOURCES FOR USERS

Source	Cardinal Data	DMS/ Cullinet	Systems by MICA	Unitronix	Total
Tertiary					
Consultants	1				1
Trade Association		1			1
Industry Conference		1			1
Thru User Corporate Headquarters		1			1
Thru User Company Internal Staff		1			1
Trade Show		1			1
Reference Accounts		1			1
TOTAL	8	**10**	3	7	28

USERS' DESIRED PRODUCT ENHANCEMENTS—CARDINAL

(3 Respondents; 1 VAX, 2 HP 3000)

DEC VAX (1 Respondent)

- Better Inquiry Facilities
- More Flexibility for Users When Making Inquiries

HP 3000 (2 Respondents)

- More Inquiry Capability (Offered in Subsequent Version)
- Inventory Module
- AP/AR Module

USERS' DESIRED PRODUCT ENHANCEMENTS—DMS/CULLINET (I)

(6 Respondents; 3 VAX, 3 PDP-11/44)

DEC VAX (3 Users)

- Improved Baseline Software

  Ex: Invoices Drop Off AR Aging Report

  Ex: AR Balances at 30/60/90 Days Drop from the Report

- DBMS, Not a File-Oriented, System
- Stores to Have On-Line Access to Inventory Information
- Computerization of Warehouse

USERS' DESIRED PRODUCT ENHANCEMENTS—DMS/CULLINET (II)

DEC PDP-11/44 (3 Respondents)

- The Ability to Transfer Data from 11/44 to IBM Mainframe
- Permit Customers to Access System to Place Orders, etc.
- Ability of One Distribution Site to Check Inventory of Another Site
- On-Line Order Entry (Now Batch Processed at Headquarters; 11/44s are Used in the Field)
- More-Flexible Reporting
- More-Flexible Pricing
- Easier Access by Users to Information in order to Do Analysis

USERS' DESIRED PRODUCT ENHANCEMENTS—SYSTEMS BY MICA

(2 Respondents; Both VAX)

- Better Built-In Accounting Controls
- Budgeting Capabilities
- Spreadsheet Capabilities

USERS' DESIRED PRODUCT ENHANCEMENTS— UNITRONIX

(4 Respondents; All VAX)

- Ability to Do Audit Trails
- DRP
- Reliable Inventory Data
- Reliable Financial Data
- Easier-to-Use GL Module
- Warehouse Control/"Put Away" System
- MRP
- Statistical Reporting of Performance in Different Areas
- Better Sales Analysis Reporting
- Better Inventory Control (Has Been Modified but Needs More Work)
- Inventory/Sales for Consigned Goods
- Better Algorithm to Determine What Inventory Items Should Be Ordered

SUMMARY—USERS' DESIRED PRODUCT ENHANCEMENTS

Cardinal Data

- Improved, More Flexible Inquiry Capabilities (VAX & HP 3000)
- Modules: Inventory and AP/AR

DMS/Cullinet

- VAX: Less Flaky Software (A/R Aging; 30/60/90-day A/R Balances)
- PDP-11: Easier Access to Information in the System; Lack of Communication with IBM Mainframe

Systems by MICA (VAX)

- Better Built-In Accounting Controls

Unitronix

- Reliable Inventory & Financial Data; Ability to Do Audit Trails
- DRP (Reordering; Better Inventory Control; "Put Away" System)

NEW OR DIFFERENT PRODUCT FEATURES DESIRED—CARDINAL

(3 Respondents; 1 HP 3000, 1 MicroVAX, 1 VAX)

- Fully Integrated Inventory/Accounting/Bill of Material/ MRP Setup (HP 3000)
- Improved Screen Handling (MicroVAX)
- Ability to Move More Easily between Inventory/Order Entry/Accounts Receivable Modules (VAX)
- EDI Support (VAX)
- Scrolling of Screens (VAX)
- More Flexible/Easier Report Writing & Documentation Features (VAX)

NEW OR DIFFERENT PRODUCT FEATURES DESIRED—DMS/CULLINET

(5 Respondents; 2 VAX & 3 PDP-11/44)

DEC VAX

- Integrate Software with Factory System (Shop Floor Control, MRP)
- Improved Report Generation Facility
- Better Query Language

DEC PDP-11/44

- Ability to Change Screen Formats
- Flexible Screen Design
- AI
- Better Networking Capabilities

NEW OR DIFFERENT PRODUCT FEATURES DESIRED—SYSTEMS BY MICA

(4 Respondents; All VAX)

- Improved Support for Multiple Warehousing
- DRP
- VAX-Based Spreadsheet
- Faster
- Support Automated Warehousing
- Support Automated Receiving
- Handle Large Volume of Orders and Transactions in a Short Time
- Generate Shipping Manifests

NEW OR DIFFERENT PRODUCT FEATURES DESIRED—UNITRONIX

(4 Respondents; All VAX)

- Bar Code Interface
- 4GL Implementation
- Support for Multiple Foreign Currencies (Purchasing and Ordering)
- Show Broken Pallets and Open Holes
- Show Customer Needs before Breaking Down a Pallet, Rather Than Breaking Down the Pallet and then Removing Same Stock for Shipment
- Ease of Use
- We Ordered "PRAXVU" Report Writer to Help Extract More Information
- Support Telemarketing

SERVICES DESIRED BY USERS (I)

Cardinal Data (No Respondents)

- None

DMS/Cullinet (3 Respondents)

- Classes (Operators/Programmers)
- Consulting
- "Hands-On" Training
- Extra Support for Certain Period of Time Following "Hands-On" Training
- Refresher Courses to Update Staff/Users with Capabilities Offered through Subsequent Releases

SERVICES DESIRED BY USERS (II)

Systems by MICA (1 Respondent)

- Software Customization

Unitronix (3 Respondents)

- Programmers Highly Knowledgeable about Unitronix Software
- Ongoing Education for DP Staff
- Customization/Consulting
- Evaluate Performance of Entire System (SW/HW)

SUPPORT IMPROVEMENTS SUGGESTED BY USERS (I)

Cardinal Data (1 Respondent)

- Extended Hours for Support
- More-Knowledgeable Support Staff
- More Involvement by Technical Support Personnel to Resolve Problems

DMS/Cullinet (6 Respondents)

- Improved User Group (3 Mentions)
- Weak Documentation (2 Mentions)
- "They Provide the Worst Customer Service"
- Faster Response
- (Quality/Content of) Annual Meeting

SUPPORT IMPROVEMENTS SUGGESTED BY USERS (II)

Systems by MICA (3 Respondents)

- More-Stable Software
- Improved User Documentation
- Improved Technical Documentation
- User Group
- More Telephone Support

Unitronix (2 Respondents)

- Fewer Bugs in New Software Releases
- More Experienced People, Especially for New Packages or Revisions to Current Software
- Better Documentation

SUMMARY—SERVICES/SUPPORT IMPROVEMENTS DESIRED BY USERS

Services (Innovative)

- "Hands-On" Training
- Extra Support for Specified Period Following "Hands-On" Training
- Refresher Courses
- System Performance Evaluation and "Tuning"

Support Improvements

- Improved Documentation
  - Technical
  - User
- Technical Support Staff
  - More Knowledgeable
  - Access to Technical Personnel

INTRODUCTION—USER PERCEPTIONS OF VENDOR FUTURE DIRECTIONS

- Asked of All Respondents
- Information Basis: Sales Rep/User Group
- Topics:
  - DBMS
  - Products
  - Upgrades to Existing Services
  - CPUs
  - Geographic Expansion
  - Industry Segments/Industries

FUTURE DIRECTIONS—CARDINAL DATA
(2 User Responses)

New DBMS

- Looking at VAX RMS File Structure
- Will Run CINCOM Ultra or Spectra DBMS on the VAX

New Products

- Automate Deposit Record from Bank to A/R
- EDI Module
- "Notepad" Capability for System (Enter Notes in System at Any Point)

Upgrades to Existing Services

- Better Training for Customer Services Staff
- Due to Heavy Customization, Offer More In-House Training Classes

FUTURE DIRECTIONS—DMS/CULLINET
(2 User Responses)

New CPUs

- Due to Cullinet Influence, Suspects Porting to IBM

New Products

- Automate the Warehouse (Example: Putting Hand-held Computer Terminals on Forklifts)

New DBMS

- Trying to Incorporate IDMS

FUTURE DIRECTIONS—SYSTEMS BY MICA
(5 User Responses)

New Products

- EDI (2 Mentions)
- Demand Forecasting (2 Mentions)
- Warehouse Management:
  - DRP (2 Mentions)
  - Random Slotting (No Fixed Picking Locations)
  - Slotting by Activity Code (Based on Item Turnover and Cost of Setup and Production)
  - Manpower Optimization

Upgrades to Existing Services

- Tighter Quality Control
- Have Developed Software Testing Modules
- Have Standardized Releases of Products

FUTURE DIRECTIONS—SYSTEMS BY MICA
(5 User Responses)

Geographic Expansion

- North America
- Canada

New Industry Segments/New Industries

- Paper Distribution
- Grocery Distribution

New DBMS

- DEC RDBMS

FUTURE DIRECTIONS—UNITRONIX (I)
(4 User Responses)

New Products

- Increased Manufacturing Functionality
- "Put Away" System
- (Possibly) Forecasting System for Distribution
- Bar Coding
- Warehouse Space Optimization
- Support for J-I-T Inventory

New DBMS

- (In Response to a Customer's Question, the Company Had...) "No Desire to Support a DBMS"
- Licensed XENTIS, an Improved Report Writer over DEC's Datatrieve; Unitronix Is Not Using a True DBMS

New CPUs

- (Hearsay) "Looking at IBM"

FUTURE DIRECTIONS—UNITRONIX (II)
(4 User Respondents)

Geographic Expansion

- Midwest:
  - Referral Call from Cleveland
  - User Conference in Denver
- Sales Offices in Denver and Florida (Reality: Denver Only)

New Industry Segments

- Moving from Manufacturing to Distribution
- Moving from Distribution to Manufacturing
- Light Manufacturing

New Services

- Added Service Representative for Pittsburgh and West Virginia Area
- On-Line Documentation

OTHER USER COMMENTS—CARDINAL DATA

- None

OTHER USER COMMENTS—DMS/CULLINET

- "We rewrote half of the DMS product. We now maintain it in-house. DMS is better suited for high-inventory, low-work-in-process/finished goods operations (versus build-to-order operations). We spent about $200,000 to $250,000 in major custom modifications, which were *not* incorporated into future baseline software releases."
  (U.S. manufacturer of industrial valves)

- "Very poor sales/service since the acquisition by Cullinet. Although we are listed as a reference account, we have not seen a sales rep in months. I wrote a letter to the Cullinet Vice President and am awaiting a response."
  (Canada-based lumber retailer)

- "After the Cullinet purchase, they became very difficult to talk to and became heavily oriented to money."
  (U.S. manufacturer of heavy equipment)

- "Not much interest by Cullinet in the Distribution area."
  (Distribution Center for U.S. manufacturer of heavy equipment)

OTHER USER COMMENTS—SYSTEMS BY MICA

- "Every 4 to 6 weeks, MICA logs into its system (VAX-11/750) and leaves messages."
  (U.S. hammer-and-nails hardware distributor)

- "100% distribution focus—no manufacturing software."
  (U.S. paper products distributor)

OTHER USER COMMENTS—UNITRONIX

- "They are dropping vendor support for VAX-based product. We will freeze the software and support it in-house."
  (Distributor/manufacturer of bicycle components)

- "We froze VAX-based software and are supporting it in-house."
  (Distributor/manufacturer of light fixtures)

SUMMARY—OTHER USER COMMENTS

Cardinal

- None

DMS/Cullinet

- Poor Service
- Froze the Software; Now Doing In-House Support
- Following the Acquisition, Became Difficult to Talk To
- Not Much Interest in Distribution

Systems by MICA

- Every 4 - 6 Weeks, MICA Logs into Its System & Leaves Messages
- 100% Distribution Focus; No Manufacturing

Unitronix

- Froze the Software; moved to In-House Support (2 Respondents)

Vendor Synopses

VENDOR SYNOPSIS—CARDINAL DATA (I)

- Highest T&M Service Revenues (40%)
- HP 3000
- Distributors
- Will Begin User Group; No Newsletter
- Best Balance of Strengths, But...
- ...Software Is Not Optimized for DEC CPUs (4)
- Weakness: Rapid Company Growth

VENDOR SYNOPSIS—CARDINAL DATA (II)

- Broadest Market Focus
- Referrals from Software Vendor (RossData; Palo Alto)
- Users:
  - Better Inquiry Facilities
  - Better Access to Technical Staff
- Futures:
  - VAX RMS or CINCOM Ultra/Spectra RDBMS?
- No Additional User Comments

VENDOR SYNOPSIS—DMS/CULLINET (I)

- Largest "Parent" Company; Not Believed Profitable in Distribution
- Acquired DMS in 1987
- Strongly Dependent on License Fees
- Most Sophisticated Software Pricing
- Direct U.S. Sales; Uses Distributors Overseas
- CMP, Not SCMP
- Least Number of New Customers in 1987

VENDOR SYNOPSIS—DMS/CULLINET (II)

- Flexible, Versatile Software
- "Flaky" Software for VAX
- Possible Weakness: Sales/Marketing
- Limited Software Functionality on PDP-11
- Few Major Support Weaknesses, But...
- ...Hard to Work with Since Acquisition
- Employee Turnover

VENDOR SYNOPSIS—DMS/CULLINET (III)

- Most "Advanced" Future Directions
- Most Focused Target Industries
- Weak Documentation; Fair/Poor Customer Service
- User Comments:
  - Poor Support
  - No Follow-Up
  - Hard to Work With
  - Not Much Interest in Distribution

VENDOR SYNOPSIS—SYSTEMS BY MICA (I)

- Resells Hardware
- Lowest Annual Software Maintenance Fee
- Least Number of U.S. Sales Offices
- Non-U.S. Presence in Canada, England, Ireland
- Marketing Emphasizes Reference Accounts
- User-Friendly Software

VENDOR SYNOPSIS—SYSTEMS BY MICA (II)

- User Comments:
  - Excellent Technical Support
  - Company Is Responsive to Customers
  - Company Is Ahead of Industry Trends
- Low Price
- Key Weaknesses:
  - User Documentation (2)
  - Stability of Software

VENDOR SYNOPSIS—SYSTEMS BY MICA (III)

- Moving from Custom to Packaged Software
- Highest Number of Support-Related Weaknesses
- Short-Term Improvements:
  - Software Quality Control
  - Customer Support
  - Standardized Software Releases
- Future Targets: Paper Distributors/Grocery Distributors
- User Observation: Focus on Distribution, Not Manufacturing

(LIMITED) VENDOR SYNOPSIS—UNITRONIX (I)

- Went Public; Grew Through Acquisition
- Slowest Revenue Growth Expected
- Balanced U.S./Non-U.S. Revenues (50%/50%)
- Smallest Support/Operations Staff
- Broadest Product Lines Supported (VAX, MicroVAX, PDP-11)
- No Distributor Sales; All Direct

(LIMITED) VENDOR SYNOPSIS—UNITRONIX (II)

- Strengths:
  - Customer Commitment
  - Responsiveness
  - Annual User Group Meeting
  - Marketing
  - High Price

(LIMITED) VENDOR SYNOPSIS—UNITRONIX (III)

- Weaknesses:
  - Unreliable Software
  - Software Quality Control
  - Unreliable Procedures and Data
- NOTE: 2nd Highest Number of Product-Related Weaknesses
- Inconsistency: Support
- Other Comments: 2 Customers Froze VAX-Based Product and Are Supporting the Software In-House

VENDOR CHARACTERIZATIONS (I)

Cardinal

- Lagging in Marketing Prowess
- Needs DEC-Optimized Software
- Fastest Growing
- Could/Should Improve Technical Support

Cullinet

- Problem: Post-Sale Support
- Big Company Attitude
- Unresponsive
- Lost Control of Accounts

VENDOR CHARACTERIZATIONS (II)

Systems by MICA

- Transition from Custom to Packaged Software
- Product Problems
- Poor Documentation
- Limited Sales Effort

Unitronix

- Marketing Driven
- Responsive
- Unreliable, Flaky Software
- Inconsistent Support (Possibly Due to the Smallest Support/Operations Staff)

CONCLUSIONS

- User Needs: Varied
  - Manufacturing vs. Distribution vs. Manuf./Dist.
  - Process vs. Discrete Mfg.
  - Interface with Accounting/Financial Software
- Oxymoron I: "Off-the-Shelf Distribution Application Software"
- Oxymoron II: Focused Marketing
- Vendor Strengths: Product Attributes
- Vendor Weaknesses: Support and/or Service

INTRODUCTION TO INPUT'S RECOMMENDATIONS

- Limited
  - No Interview—Unitronix
  - No Comparable Vendor/User Data—GSI/Transcomm

RECOMMENDATIONS (I)

Marketing

- Cities with Expensive Real Estate ===> Greatest "Added Value"
- Depending on GSI/Transcomm Product, Target Industries with Heaviest Distribution-Only (or Combination Distribution/Manufacturing or Manufacturing-Only) Content
- Investigate the "Medium-Sized Buying Unit Gap" ($50-$250 Million)
  - Organizational Issue (Decentralized or Centralized?)
  - Neither Mini nor Mainframe?
- Attack Cullinet!
  - Key Differentiators: Support/Service/Ease of Working with Them/Responsiveness
  - PDP-11/44 Base (Eventual Upgrade)

RECOMMENDATIONS (I)

- Strengthen Relationships with DEC
- Improve Industry Presence/Name Recognition
  - Publishers of Application Software Directories
  - All DEC-Related Periodicals
- Listen to the User Group

RECOMMENDATIONS (II)

Support/Service

- Assumptions:
  - Stable GSI/TRANSCOMM Software
  - Decent User Documentation
  - High-Quality Technical Documentation
- Longer Support Hours for Western U.S. & Western Canada Customers
- Offer Remote Logging/Monitoring of Customers' Applications

RECOMMENDATIONS (III)

New Products

- "Bold": Next Generation Distribution Management Software
- DRP
- Support "Flexible" Warehouse Environments
- Required: RDBMS

ADDITIONAL RESEARCH

- Comparative GSI/TRANSCOMM Information
  - Vendor Profile
  - User Perspective
- Comparable Information on Secondary Competitors
- Corporate Strategy Assistance
  - Strategy Development
  - Independent Validation & Verification